

ROAD ENGINEERING PROPOSALS FOR BETTER ROAD SAFETY	CURRENT STATUS (Last updated on 12 th January 2005)
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AUTOMATIC TRAFFIC CONTROL SIGNALS help control movement of traffic on road intersections. The signal also provides gaps in the flow of traffic that help pedestrians to cross busy roads.

	New ATC Signal to be installed at following locations			
A	1	Sec 33/45 Intersection (Between V5 Roads & Shanti Path)	Heavy traffic emerging from Burail enters Shanti Path and also merges with traffic from several schools in the vicinity.	C.E. to develop a rotary with ATC Signal (Target Date for Completion -31 st March 05)
	2	Sec 34/35 V4 Intersection	Rotary to be replaced by ATC Signal on this busy road to Mohali.	C.E. to add ATC Signal to existing rotary (Target Date for Completion -31 st March 05)
	3	Kisan Bhavan Chowk	Heavy rush. It is the entry point towards ISBT 17 for long route buses. ATC Signal needs to be added to existing rotary.	Recommendation sent to C.E. U.T. 20/12/04
B	Replacement of obsolete ATC Signals at 15/16 V4 and 20/21 V4 intersections by modern LED based signals.			Deferred for now

DIGITAL REVERSE TIMERS installed on some of the ATC Signals show the exact time left for the signal to change. The timers help motorists judge the change in signals in advance and thus prevent over speeding near the crossing. The timers thus help check stop line violations and accidents at the intersections. The timers show the exact time left for the signal to turn green and thus reduce the fits of impatience and road rage for the waiting motorists. The blowing of horns is also considerably reduced at the intersections.

A	All new ATC Signals should have Digital Reverse Timers installed as part of original equipment.			Recommendation implemented by the Engineering Department. New signals installed at Fun Republic Crossing & 3 BRD Crossing have timers as O.E.
	Digital timers should be installed at the following existing ATC Signals			C.E. to instal timers on these signals. (Target Date for Completion -31 st March 05)
	1	JN 34 (Piccaddily Roundabout)		
	2	16/17 V4 Staggered Intersection		
3	17/18 V4 Staggered Intersection			

	4	18/19 V4 Intersection	C.E. to instal timers on these signals. (Target Date for Completion -31 st March 05)
	5	Modella Factory Turn (Sec 29 V4 & Purv Marg Staggered Intersection)	
	6	Sec 45/46 V4 Staggered Intersection	
	7	JN 61 (45/46/49/50 Chowk)	
B	Colour of the LEDs used for the timer at Fun Republic Intersection on Kalka Road needs to be changed from Blue to Red. <i>The argument advanced that it is more visible to senior citizens has no takers.</i>		C.E. to change timer. (Target Date for Completion -31 st March 05)
BATTERY BACK UP FACILITY for ATC Signals ensures uninterrupted working of the ATC signal even during the periods of power supply failure. The problem of power failure is particularly acute during summers. The option of Solar Power Systems with battery back up needs to be explored as it is working flawlessly at JN 34 Signal.			
A	Battery back up needs to be provided for all ATC Signals. Initially all signals having Reverse Timers should be given preference.		C.E. to instal battery back up for ATC Signals on Transport, Railway & Housing Board Chowks. (Target Date for Completion -31 st March 05)
PEDESTRIAN BARRIERS & BARRIERS FOR ILLEGAL TRAFFIC INGRESS POINTS: The installation of pedestrian barriers like iron grills/barbed wire fencing on the central verge and along the road berm reduces the number of pedestrian entry and crossover points. These barriers also check illegal vehicle entry.			
A	Pedestrian Barriers need to be installed at the following locations:		
	1	On the Central Verge all along the Vikas Marg. The barrier needs to be of Double Height along Colony No.5 area. There are numerous deaths of pedestrians and cyclists on this busy road having extensive slum area adjacent to it.	Barrier to be provided through Greenery & Shrubs grown on the Central Verge. C.E. & C.A. to finalize design by 31 st March 05.
	2	Along the Southern Road Berm of Vikas Marg along Colony No.5 Area. Similar containment of pedestrian movement has been done by HUDA in Sector 16 Panchkula along Rajiv Colony area.	
	3	Construction of a wall along the road berm on Burail side of the 45/46 dividing road (Sukhna Path). This stretch is rendered dangerous by heavy ingress of illegal traffic emanating from vehicle repair shops in Burail along this stretch.	Construction of Boundary wall by MC
	4	On the berm along the newly constructed slip road on JN 48 (Attawa Chowk) on Attawa side.	High Court Stay
	5	Along the Raipur Khurd side of Ambala Road near Airport Chowk. The Marble market contributes to heavy ingress of illegal traffic.	Action by DC UT

ROAD DIVIDERS: These help separate the opposing streams of traffic thus avoiding head-on collisions. The Central Verge also acts as a traffic island facilitating safe crossing of the road by pedestrians.

Road dividers need to be constructed at the following locations			
A	1	45/46 dividing road (Sukhna Path) - this busy stadium road to Mohali is highly accident prone with frequent head-on collisions.	Action by C.E. MC (Target Date for Completion -31 st March 05)
	2	51/52 dividing road (Himalaya Marg) leading to marble market & Mohali is a highly accident prone road.	Immediate Action by C.E. MC
	3	Sec 8/9 dividing road- the divider should be extended up till the staggered intersection as currently the divider is extended to an awkward distance.	Immediate Action by C.E.
B	Dividers need to be constructed near all intersections whether Controlled or Uncontrolled as most accidents occur at the intersections.		Action by C.E.

RUMBLE STRIPS force motorists to reduce speed without destabilizing the vehicle. They should be installed on all points where minor roads enter major roads. More particularly these should be installed where V5 Roads meet V2/ V3 Roads. These strips should also be installed before Schools.

C.A. to provide drawings to C.E. MC by 31st Jan 05.

BLINKERS are used to caution motorists about approaching road intersections/crossings. Motorists are required to slow down when approaching a yellow blinker and to proceed only if it is safe to do so. Motorists are required to stop when approaching a red blinker and to proceed only if it is safe to do so. The location of Red & Yellow blinkers should be rational and should be as per feedback from the Traffic Police. There is a need for reviewing the sites of all existing blinkers in order to finalize their deployment.

Blinkers need to be urgently installed at the following locations		
1	Sec 4 & 9 V5 Road intersection on the Vigyan Path.	Blinkers to be installed by C.E. by 31 st March '05
2	T-Point in front of Exit Gate Hotel Shivalikview.	
3	T-Point near Gurdwara Sec 47C	
4	Staggered intersection on road dividing Sec 44 &45	
5	Crossing of Sec 39, 38 West & Dadumajra Village	Blinkers to be installed by C.E. by 31 st March '05
6	Sec 39 & 40 V4 Intersection.	
7	Sec 38 & 38 West V4 Intersection.	
8	Sec 52 & 61 Intersection	

<p>STREET LIGHTS- adequate street lighting is important because it increases visibility & reduces the glare of headlights of oncoming traffic. More than 50% of fatal road accidents occur during late evening & night hours. Cyclists & pedestrians who account for nearly 40% of fatalities are the most vulnerable after dark. Senior citizens are troubled the most by the problem of headlight glare. There is a need for a Control Room of the engineering wing where a complaint can be lodged regarding malfunctioning of the Street Lights and a complaint number should be assigned to each complaint to monitor proper follow up. Alternately, the maintenance work can be outsourced as has been done for the ATC Signals.</p>	<p>Control Rooms to be established by C.E. U.T. & C.E. MC and wide publicity to be given to the telephone numbers</p>
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ROTARIES are constructed at intersections of two major roads. 'Give Way to Traffic on the Right' Rule guides the movement of traffic on rotaries. Rotaries are the best solution for moderate level of traffic movement. They become sub-optimal once the traffic movement gets heavy. The rotary is, however, a safer solution than the ATC Signal as the chances of head-on collision are negligible at intersections having rotaries. Problem of enforcing the right-of-way rule, however, exists. Combination of ATC signal with the large sized rotary is another possibility.

New rotaries need to be constructed at the following locations:			
A	1	Sec 42 V4 & V5 intersection near Food Craft institute.	C.A. to provide drawings to C.E. MC
	2	Sec 40 / 41 V4 Intersection.	
	3	Sec 38/38 West V4 Intersection.	
	4	JN 62 (46/47/48/49 Chowk) - Heavy Vehicle Traffic on Vikas Marg & Chandi Path (the permitted truck route to Dakshan Marg) meets at this point.	C.E. to develop a rotary (Target Date for Completion -31 st March 05)
	5	IA Ph I near CTU Workshop- Located on the busy link road to Panchkula witnessing heavy jams during rush hours.	C.E. MC to develop a rotary (Target Date for Completion -31 st March 05)
	6	IA Ph I at Bhushan Factory Chowk- This is a busy road intersection leading to Ambala Road, Purv Marg and Panchkula Link Road and is in vicinity of big industrial establishments.	C.E. MC to develop a rotary (Target Date for Completion -31 st March 05)
Existing Rotaries need to be widened at the following locations:			
B	1	Airport Chowk. This has been a highly Accident prone point with 5 deaths taking place due to road accidents in 2004.	Chief Architect to submit drawings to C.E. MC

C	The rotary on the new Panchkula Link Road via Manimajra on its intersection with road to Railway Station needs to be removed. An ATC Signal has been installed at this intersection and the diameter of the rotary is too small for it to coexist with the ATC Signal.	Proposal rejected by the Road Safety Council (28-12-2004)
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SLIP ROADS help the traffic to bye-pass the ATC signal /rotary while turning left and thus reduce congestion at the intersection.

A	Slip Roads need to be constructed at following locations-		Road Safety Planning Committee to examine these issues
	1	Around Sec 34/35 V4 Rotary.	
	2	Himalaya Road (coming from North) left to Sec 18 V4.	
	3	Jan Marg (coming from North) left to Sec 22 V4.	
4	Slip road for the High Court Chowk – the point is highly dangerous as five roads meet at this small rotary.		
B	Slip Road leading from Panchkula Road (Panchkula Side) to Railway Station Road at Railway Station Chowk needs to be realigned and the entry point should be shifted further away from the intersection.		
C	Slip Road leading from Himalaya Marg (Southern Side) to Dakshan Marg at JN 34 needs to be realigned and the entry point should be shifted further away from the intersection.		

ROAD MARKINGS:

A	Continous Yellow Center Line not to be marked indiscriminately all over the city roads. Traffic police to be consulted. Tubular plastic cones at regular intervals on the center line to emphasize no crossing while overtaking.	Road Safety Planning Committee to examine these issues
B	No lane changing zones to be marked by Solid Lane Lines near intersections with intermittent tubular plastic cones to emphasize the no crossing over character of the marking.	
C	Stop Lines & Give Way Lines at all relevant intersections.	
D	Zebra Crossing needs to be marked by special high quality paint.	
E	Straight Free Lanes on Left-Right Staggered Intersections of the type at 17/18 V4 Intersection, Modella Factory Intersection on Purv Marg, CTU Workshop Turn on Purv Marg etc. The lane for going straight can be the left-most lane separated by tubular cones from traffic turning right at the staggered intersection/ T-Turn. Traffic in this lane could then cross the intersection without having to stop at the ATC Signal. This simple innovation has been adopted at NH-1 at turning for Gohana-Rohtak road.	

ROAD SIGNS:		
A	Informatory Road Signs – prominent overhead signage for the entire city with directions for different destinations and information on distances. Directions regarding the correct Lane to be followed need to be incorporated.	Gantry type Road signs to be installed by C.E. by 31 st Mar '05
B	Stop Signs and Give Way Signs need to be installed on all relevant intersections. Give Way Road Signs are especially needed at points where slip roads join the main roads. These must always be accompanied by Road Markings. A rational decision has to be taken whether an intersection has to be controlled by a Stop Sign or a Give Way sign depending on the traffic flow. The current practice of the Engineering department of installing these signs without any consultation with the Traffic Police has to be changed. Any direction given by any Road sign should be supported by logic and should have the back up of enforcement.	Road Safety Planning Committee to examine these issues
C	Speed Limit Boards: Prominent backlit road signs should indicate the speed limits to the motorists at all entry points to the city. The current signage is too small and inconspicuous.	Road Safety Planning Committee to examine these issues
D	Mechanism for monitoring periodic painting and maintenance of Road Signs. The periodic trimming of tree branches should be ensured so that the road signs are not eclipsed.	
ROAD WIDENING ETC.		
A	The following roads need to be widened & converted to dual carriageway with a Central Verge –	
1	Udyog Path from Bus Stand Chowk to Purv Marg to allow Himachal bound long route buses to use it for onward journey and thus decongest the Himalaya Marg.	MC to take up in 2005
2	Sector 20/21 dividing road (Sarovar Path) to allow Delhi bound long route buses to use it for onward journey and thus decongest the Himalaya Marg.	MC to start work shortly
3	Road linking Ambala Road and Panchkula Road through IA Ph I.	Cannot be widened beyond existing 33 Feet.
4	Widening of Railway Level Crossing on new link road to Panchkula via Manimajra.	Administration to take up matter with GM Railways.
5	Road from Transport Chowk to Bapu Dham Colony.	Work being undertaken.

	6	Road dividing Sector 26 & Grain Market, from Grain Market Chowk to St. Kabir School turn.	New Mandi coming up in Sec 39
	7	Road dividing Police Lines & Grain Market.	
	8	Road from Sec22D Gurudwara to 22C Govt. High School	MC undertaking the work
	9	Widening of Vigyan Path from Jan Marg to Sukhna Path. This would reduce load on the Madhya Marg and would encourage the use of Panchkula Link Road via Manimajra.	MC undertaking the work
	10	Widening of road from Khuda Lahora to PGI.	CA to supply drawings to C.E. by 28 th Feb '05
	11	Sec 52/61 Dividing Road	Recommendation sent to C.E. U.T. 20/12/04
	12	New OPD Gate PGI - Heavy rush during OPD Hours.	C.E. to undertake conversion to dual carriageway of Sec 11/12 Dividing Road with central divider.
B	The encroachment at the mouth of the back lane of Sector 26 Showrooms needs to be cleared and proper connectivity provided to the Chandipath. This route is open for truck movement as per notification but is currently not usable.		Action by MC & E.O.
C	Early completion of Dual Carriageway Road from Tribune Chowk to Vikas Marg. This road would be used as a Chandigarh Bye-pass for traffic coming from Punjab & heading for Delhi/Himachal. All heavy traffic to Transport Area & Industrial Area would also use this road.		Work being expedited by C.E.
SLOW CARRIAGEWAYS: The slow carriageway runs parallel to busy roads and is used by slow moving non-motorised traffic. It is also used for connecting smaller roads to the main road so that traffic entering or exiting the main road is separated from the main fast moving stream.			
A	Slow Carriageway from Tribune Chowk to Hallomajra Chowk on both sides of the Ambala Road.		Road Safety Planning Committee to examine these issues
B	Slow Carriageway on both sides of Purv Marg.		
C	Slow Carriageway on the Southern side of Vikas Marg.		
PEDESTRIAN SUB-WAYS: Pedestrian sub-ways allow safe passage to pedestrians on busy roads with fast moving traffic.			
A	Pedestrian subway near Durga Nursery on Panchkula Road. Alternately an underpass to allow cars, two-wheelers, cyclists & pedestrians at this location (of the type constructed on NH-8 at Manesar, Gurgaon).		Road Safety Planning Committee to examine these issues
B	Pedestrian subway/ Underpass at Hallomajra Chowk. Migrant industrial labour residing at Hallomajra and working at Industrial Area Ph I uses this dangerous crossing in large numbers.		

<p>APPLE TRUCK TRAFFIC & PARKING: The Apple carrying trucks from Himachal should be given a proper metalled parking somewhere near Manimajra from where Apple Crates are transported by Three-Wheelers & Cycle Rickshaws. Alternately the Green Belt area parallel to Sec 26 / Grain Market dividing road adjacent to Polytechnic college could be metalled. This area is generally converted to slush during the rainy season just before the Apple Trucks start coming in.</p>	<p>Road Safety Planning Committee to examine these issues</p>
<p>TRANSPORT AREA PARKING: There is urgent need for the metalling of the kutcha truck parking area as it is getting encroached upon and is unusable during rains.</p>	<p>Road Safety Planning Committee to examine these issues</p>
<p>SUKHNA LAKE PARKING ARRANGEMENTS need to be augmented. Hundreds of cars are parked all over the green space in Sec 5. A parking lot could be developed near the regulator end to reduce the load on the Rock garden side.</p>	<p>Road Safety Planning Committee to examine these issues</p>
<p>PROBLEM OF ENCROACHMENTS encroachment of roads/road berms/foot paths/parking area reduces space available for the movement of traffic. For lasting results any area that is cleared of encroachment should be protected by physical structures like iron grills, brick walls etc. For Example, the encroachment of metalled parking area of Sec 19C Sadr Bazaar by rehris/hawkers leading to parking in front of houses. Regular complaints received from residents 19C.</p>	<p>Road Safety Planning Committee to examine these issues</p>
<p>ISBT 43</p>	
<p>Work should be expedited so that all Punjab bound buses can operate from this Bus Stand.</p>	<p>C.A. to work out change in design in consultation with DT. Phase II Construction started on 3rd Jan 05.</p>
<p>The long route buses travelling to ISBT 17 from ISBT 43 should go via the 42/43 Dividing Road thus avoiding the journey on the congested Himalaya Marg & Shanti Path. The Architectural Plan of ISBT 43 should be accordingly adjusted. An amendment in the Bus Route Notification can follow.</p>	

OTHER IMPORTANT PROPOSALS PERTAINING TO ROAD SAFETY		CURRENT STATUS
A	Involvement of the Educational Institutions in the spread of Road Safety Awareness.	
	1	Compulsory attachment of School Teachers with the Children Traffic Park.
	2	Operationalising the High Court Judgment in Namit Kr. Case by making it mandatory for schools to deploy at least two teachers on traffic management duty during school opening & closing hours.
B	Introduction of Demerit Point System for automatic suspension of Driving Licences of habitual traffic offenders on lines of Western Countries. Under this system a predetermined number of demerit points are awarded to a driver who gets challaned for a Traffic Offence. These points keep adding up and once they reach a certain level the Driving Licence of the driver gets suspended for a period.	
C	Introduction of a Multiple Choice Driving Theory Test for award of Driving Licence as envisaged by the Motor Vehicle Act.	
<p>Children Traffic Park: The Children Traffic Park houses the Road Safety Cell of the Chandigarh Traffic Police. The Road Safety Cell is the nodal agency for all Road Safety education activities. The Cell is also responsible for the study of road accidents and the formulation of road engineering proposals. The test for knowledge of road rules and driving competence for the issue of the driving licence is also conducted at the Children Traffic Park.</p>		
D	1	Development of the Children Traffic Park Cement Track into a modern driver track to test the driving competence in an objective professional manner. The existing track would have to be widened and some road features would have to be added. The Causeway over the N-Choe would have to be made motorable for Light Motor Vehicles.
	2	The stone-pitching work along the N-Choe needs to be undertaken on a war footing as the choe is fast cutting into the area of the park and is causing damage to the vegetation. The water from the choe frequently floods the park during rainy season.
E	Increase in sanctioned strength of Traffic police. The strength was last sanctioned 3 decades ago and since then the vehicular population has increased exactly hundredfold & the human population has increased 4 fold. The BPR&D has recommended a dramatic increase in the sanctioned strength in a recent study.	
F	Proposal to utilize 50% of Compounding Fee collected by the Traffic Police for Road Safety purposes on lines of Madhya Pradesh/ Andhra Pradesh.	

Road Safety Planning Committee to examine these issues

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G	Renovation of Traffic Auditorium, Sec 29 & provisioning of State-of-the-Art Light & Sound System for stage performance.	Recommendation sent to C.E. U.T. 14/1/05
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